

## FIELD BUDDING PRACTICES

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We have found at our nursery that T (shield) budding is the fastest and by far the most successful budding method. However, to achieve a 90-95% take the following basic conditions must exist:

1. Soil should be of good tilth with a good balanced feeding program and weeds kept well under control, both before and after planting.
2. Understock must be disease-free and of good quality.
3. Budwood should come from an indexed source, if possible. If not, it should be selected from trees and shrubs with good colour and vigour.
4. Budding knives must be kept sharp always.
5. A high level of sanitation, probably the most important single factor in a successful bud take, must be maintained.
6. Bud-eye maturity must coincide with the ripening of the understock.

We acquire our understock seedlings from the United States, Holland, Belgium and Canada; I like to bring them in as early as possible, at which time we dip them in Benlate and place them temporarily in cold storage. Early in April, we begin our planting, with the trees spaced 8-10" apart and the rows 54" apart. We prefer not to use any herbicides to control the weeds, mainly because there is little information on the effects of herbicides on bud "take," so as much of our weeding as possible is done by machine and the rest manually.

Budding is started approximately the 20th of July with *Prunus americana*, *Gleditsia*, *Sorbus* and *Fraxinus* being the first species budded. These are followed by *Malus* in early August, *Acer* around the middle of August and the flowering and fruiting cherries approximately August 20th. *Betula* and *Cornus* are always the last to be budded, this being done the last week of August and the first week of September. In our field-budding we find it preferable to work in pairs, consisting of the technician (or budder) and the bud tyer.

All rootstock stems are wiped clean of dust and dirt with a clean rag. Before budding, buds are wrapped in burlap to keep them from drying out, and are also dipped in a solution of Benlate prior to taking them out to the field. Knives, as noted, are razor sharp and are kept clean the simplest possible way, by spitting on

them and wiping them off as often as necessary, usually about every 6-10 buds. We use Tina or Knuda brand knives which are manufactured in Europe and have the finest tempered steel blades. The blades must be able to hold a finely honed edge in order to cut a perfect bud. We cut our buds thin, leaving just a sliver of wood in the shield bud. The size of the T-cut is made in proportion to the size of the buds being used, the overall length being 1-1¼". Speed is of the utmost importance in cutting, placing and wrapping the bud. Six years ago we budded *Acer palmatum* 'Ornatum Dissectum Atropurpureum' and *Acer palmatum* 'Dissectum Nigrum' around the 10th of July. In two weeks time we stubbed them just above the shield bud. By the first week of September the growth was 15-18" long, and the bud take was highly successful, with 95% success. Unfortunately they were very susceptible to frost and the first early frost killed them out. We tried this three years in a row, with the same initial success and eventual failure as a result of the early frosts. I believe that in a warmer climate, where there is no danger of frost, this method would undoubtedly be highly successful.